



An Ovivo Company

## GAS CONTROL

### VAREC BIOGAS 211 Series LOW PRESSURE CHECK VALVE

The 211 Series Low Pressure Check Valve is ideal for low pressure gas control lines where reversal of flow must be prevented.

#### Introduction

The Varec Biogas 211 Series Low Pressure Check Valve is ideal for low pressure gas control lines where reversal of flow must be prevented. The check valve is normally installed downstream of (a) meters; (b) regulators; or (c) other gas control devices that could be damaged by an accidental reversal of gas flow, pressure or explosion shock waves. It is usually located in systems where gas flow between multiple digesters or gas holders must be prevented and when gas flow reversal between several pieces of equipment installed in parallel must be prevented.

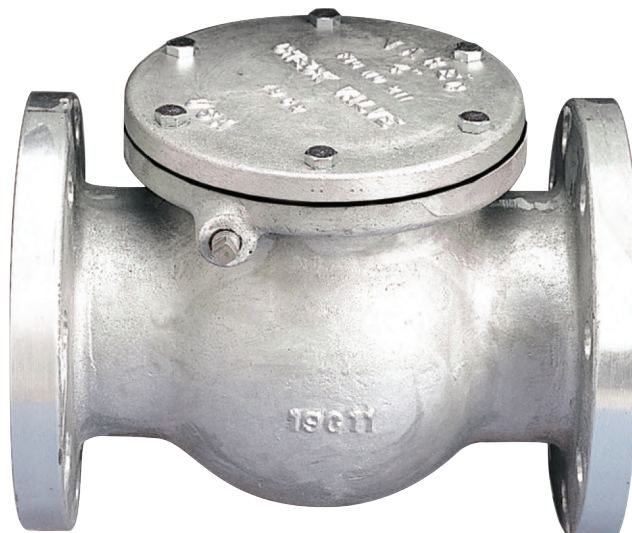
Flow curves are provided to help you select the proper size for your vapor recovery requirements. Additionally, applications engineering staff and factory trained representatives are always available to assist you.

#### Construction

The body and removable cover are constructed of cast low copper 356 T6 aluminum. The pallet, pallet arm, and removable seat ring are also manufactured of low copper aluminum. The pallet arm shaft and all hardware are manufactured of corrosion-resistant stainless steel. The check valve can either have ANSI 125 F.F. Flanges, or NPT connections.

The Model 211F (formerly our Varec Biogas 211-92) is provided with the 125 FF Flanged Connections, and the Model 211T is provided with NPT connections.

Please specify when ordering.



#### Operation

The 211 Series Check Valve design is typically used in systems where gas velocities are as low as 10-12 feet per second. The check valve utilizes a free-swing pallet or disc. Positive pressure forces the pallet away from the valve seat permitting gas to flow through the piping system. In cases of line pressure swings or flow turbulence, the pressure closes the pallet against the seat preventing any gas flow reversal.

Flow reversal upsets the biogas piping system, which may cause damage to the gas line.

The removable cover provides a convenient access to the valve internals for maintenance or replacement. The seat ring is threaded into the body, which makes it easily removable and replaceable.

The 211 Series Check valve must be installed in horizontal pipelines to ensure proper operation. The maximum working pressure is 5 psig (34.5 kPa) as a standard. Higher working pressures may be available upon request.

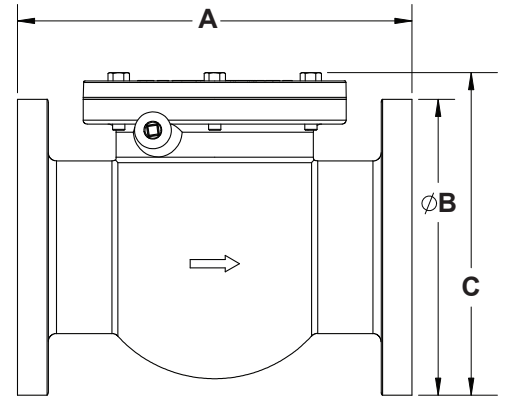
#### Design Features

- Maximum flow with minimum pressure drop
- 1" WC unseating pressure
- Cast housing in 356 T6 low copper aluminum
- Flanged or threaded connections

**Specifications**

**Dimensions and Weights, inches [mm] and lbs. (kg)**

Size Code	02	03	04	06	08	10	12
A <sub>F</sub>	8 [203]	9 1/4 [235]	12 [305]	14 [356]	16 [406]	45 1/2 [1156]	27 1/4 [692]
B <sub>F</sub>	6 [152]	7 1/2 [191]	9 [229]	11 [279]	13 1/2 [343]	16 [406]	19 [483]
C <sub>F</sub>	6 1/4 [159]	8 [203]	10 [254]	12 1/2 [318]	15 1/4 [387]	21 [533]	21 [533]
Weight (Flanged)	8 (3.8)	18 (6)	25 (11)	43 (19)	54 (24)	412 (187)	132 (60)
A <sub>T</sub>	6 3/4 [171]	7 3/4 [197]	10 [254]	14 1/4 [362]	N/A	N/A	N/A
B <sub>T</sub>	4 [102]	5 [127]	6 1/2 [165]	9 3/4 [248]	N/A	N/A	N/A
C <sub>T</sub>	5 3/4 [146]	8 [203]	9 1/4 [235]	12 [305]	N/A	N/A	N/A
Weight (NPT)	6 (3)	9 (4)	17 (8)	34 (15)	N/A	N/A	N/A



Installation, mounting arrangement and dimensions are preliminary. General information is not to be used for construction. Certified drawings are available.

**Pressure Drop inches [mm] W.C.**

**Flow Capacity, SCFH (SCMH)**

Cubic Feet per Hour of Air at 60°F (15.6°C) and 14.7 PSIA (101KPA)

	2"	3"	4"	6"	8"	10"	12"
0.25	650	1000	1500	3350	5950	31000	58016
[6.35]	(18.4)	(28.3)	(42.5)	(94.9)	(168.5)	(900)	(1643)
0.50	1250	2350	4200	7550	13400	48000	84155
[12.7]	(35.4)	(66.5)	(118.9)	(213.8)	(379.4)	(1300)	(2383)
0.75	2100	4200	8600	13800	24600	67000	110600
[19.05]	(59.5)	(118.9)	(243.5)	(390.7)	(696.5)	(1900)	(3132)
1.00	2950	5850	11550	22200	39500	88000	137351
[25.4]	(83.5)	(165.6)	(327.0)	(628.6)	(1118.4)	(2500)	(3889)
1.50	4200	8350	15900	33050	58850	125000	191772
[38.1]	(118.9)	(236.4)	(450.9)	(935.8)	(1666.3)	(3500)	(5430)
2.00	5000	10050	19250	38500	73500	160000	247416
[50.8]	(141.6)	(284.6)	(545.0)	(1090.1)	(2081.1)	(4500)	(7006)

Note: Flow is stated in SCFH air but can be corrected for waste gas at other specific gravities and temperatures

**Ordering Information**

Model	Description
211	Low Pressure Check Valve
	<b>Code</b> <b>Size</b>
	02      2"
	03      3"
	04      4"
	06      6"
	08      8"
	10      10"
	12      12"
	<b>Code</b> <b>Connection</b> (Select One)
	F      Flanged
	T      NPT
211	08      F      (Example)
Example: 8" Flanged Low Pressure Check Valve	